

Proposed Specifications – for a **Crawler Dozer 16,000 - 18,000 lb (7257 – 8165 kg)**
Operating Weight Class

Unit described below shall be a new, current year manufacture, crawler dozer that is manufacturer's latest design and production, complete, serviced, ready for work, and includes all standard equipment. Bidders shall attach an explanation of all exceptions.

SIZE.

Equipped per following specifications, SAE minimum operating weight without add-on weights shall be at least 16,000 lb (7258 kg). Operating weight with additional attachments shall be at least 19,500 lbs (8845 kg).

Circle one: Yes or No. Explain any exceptions:

ENGINE.

The crawler engine shall have a minimum 77 SAE net hp (57 kW), four-cylinder, 276 cu. in. (4.5L), turbocharged inter-cooled diesel producing a minimum peak torque @ 1,200 rpm of 251 lb-ft. It shall be a wet-sleeve cylinder liner design for maximum cooling and engine life.

Air cleaner shall be dual element, dry type filter system with evacuator valve.

The pressurized liquid cooling system shall have a water pump driven automatically adjusting belt. Radiator shall be filled with manufacturer's approved anti-freeze solution that provides protection to at least -34° F (-37° C).

The fuel system shall have a fuel shut-off valve to prevent fuel loss during filter changes. The system shall have a water separator located between the fuel tank outlet and the fuel filters.

Engine lubrication system shall be pressurized system with full-flow, spin-on filter with oil to water cooler. The engine lubrication shall be of adequate design to permit operation on slopes up to 45° in any direction. The engine oil and filter change interval shall be 500 hours.

Circle one: Yes or No. Explain any exceptions:

ELECTRICAL.

Dual 12 volt batteries shall have a minimum Cold-Cranking-Amps (CCA) rating of 950 each with a 380 min. reserve capacity. Alternator shall be a minimum of 65 amps.

Unit shall be equipped with electric horn and reverse warning alarm.

Unit shall have a minimum of two front and one rear work lights and a lighted instrument panel. The front work lights shall consist of a minimum of two grilles mounted to provide lighting over the dozer blade.

Unit shall be equipped with a master electrical disconnect switch.

TRANSMISSION

Dual-path hydrostatic drive with infinite speed capability, dynamic braking, full powers turns and counter rotation is preferred. Torque converter power shift with a minimum of three speeds forward and reverse is also allowable. The dozer shall have minimum forward speed of 5.0 mph (8.0 km/h) forward and reverse. Either design must permit unrestricted speed and direction changes under full engine rpm and load.

A load sensing system that works to downshift and up shift automatically are preferred.

The transmission reservoir must be independent of any other fluid reservoirs and use multi-viscosity engine oil.

Transmission shall have neutral/park lock, safety start switch.

Circle one: Yes or No. Explain any exceptions:

STEERING

Hydrostatic drive is preferred for full power turns and counter rotation. Oil-cooled disk clutches if using a torque converter power shift transmission. Steering shall be fully modulated at all speeds to provide smooth operation. Steering brakes shall be oil-cooled.

Circle one: Yes or No. Explain any exceptions:

FINAL DRIVE

Triple reduction, bull gear final drives must be isolated from the track frames.

Circle one: Yes or No. Explain any exceptions:

BRAKES.

The crawler shall have dynamic braking with multiple, wet-disk, parking brakes controlled by a single foot pedal, for hydrostatic transmission equipped crawler. Heavy-duty service brake controlled by foot pedal for torque converter transmission equipped dozers. The parking brake, for either system, shall be of sufficient capacity to hold weight of crawler on slopes. Parking brake must apply automatically when the crawler directional control is in neutral and within five feet whenever engine stops.

Circle one: Yes or No. Explain any exceptions:

TRACKS AND UNDERCARRIAGE.

Six single flange roller track frame with full length track frame covers. The dozer shall have two carrier rollers on each side. Sealed and life-time lubricated rollers, idlers and track chain.

Minimum 69 in. (1651 mm) track gauge. The track length on the ground shall be a minimum 86 in. (2184 mm). Minimum 24 in. (610 mm), single bar grouser track shoes. Ground pressure not to exceed 4.3 psi. (29.3 kPa). Minimum ground clearance of 13 in. (330 mm).

Fully protected track tension adjusters with hydraulic track adjuster relief valve.

Circle one: Yes or No. Explain any exceptions:

DOZER.

The dozer shall be a hydraulically actuated, inside mounted C-frame, all hydraulic blade (power-angle-tilt PAT). The blade hydraulic system shall provide raise, lower, tilt, angle and float. The blade capacity shall be a minimum (per SAE J1265) of 2.57 yd³ (1.96 m³).

The dozer tilt shall be a minimum of 15.7 in. (399 mm) right and left. It shall have a minimum raise height of 30.4 in. (772 mm) and dig depth below ground of 20.8 in. (528 mm). The minimum blade height 3 ft. 2 in. (955 mm), and blade width of 115 in. (2921 mm).

The dozer moldboard must be equipped with a three-piece replaceable cutting edge. The dozer shall have adjustable blade pitch from 52° cutting edge angle in the back position to 60° in the forward position.

Circle one: Yes or No. Explain any exceptions:

HYDRAULIC SYSTEM.

The system shall have a minimum flow of 15 gpm (56.8 L/min.) flow and provide adequate cooling. System pressure relief minimum 3,000 psi.

The independent hydraulic system reservoir capacity shall have adequate cooling and filtration to permit 2000 hour oil drain intervals.

All hoses shall be of an o-ring seal design to reduce leakage and facilitate repairs.

Hydraulic pump for use with winch

4 function hydraulic controls consisting of 3 function T-bar blade control with 1 auxiliary lever for winch control and rear plumbing for winch.

Circle one: Yes or No. Explain any exceptions:

OPERATOR'S STATION.

The operator's station shall be SAE J1040 ROPS/FOPS certified. It shall be isolation mounted and include a roof panel and minimum 3 in. (50 mm) seat belt. Instrumentation vandal protection shall be included on ROPS canopy unit.

The operator seat shall have adjustments for operator height and weight, fore/aft positioning, thigh support and lumbar adjustment in the backrest and adjustable armrests.

Under seat ROPS heater: minimum 30,000 BTU/hr

Headliner
Floor mat
Convex interior rearview mirror
Adjustable footrests
20 Amp power port
Lockable side storage box
Lunchbox and cup holder

Circle one: Yes or No. Explain any exceptions:

INSTRUMENTATION.

Unit shall have dash mounted gauges and/or monitoring system that will include: transmission temperature, engine coolant temperature, engine oil pressure, hydraulic filter restriction, transmission filter restriction, electric voltage, and electric hour meter.

Circle one: Yes or No. Explain any exceptions:

ADDITIONAL EQUIPMENT.

Unit shall be equipped with all standard equipment and shall include:

- key ignition switch w/safety start
- horn
- cold weather starting aid
- dry-type air cleaner with safety element and restriction indicator
- under hood muffler with chrome extension
- heavy-duty hinged & lockable engine side shields
- reverse warning alarm
- engine fuel filter
- mounting steps and safety hand holds
- vandal protection
- heavy-duty bottom guard
- front idler shields
- front pull hook.
- Model 4000S standard speed winch, power-in and power-out
- Retrieval hitch and pin
- Four roller winch fairlead
- 100' winch mainline and two (2) log chokers
- G.R. Wood or equivalent complete forestry protection package to include limb risers, operator protective full-screen package with front/rear screens, side screens, screened entry

doors, and heavy duty protection guards for hydraulic tanks and fuel tanks (each side and rear).

- Environmental drain package
- Extreme duty grill with hose protection
- Front counterweight minimum 300 lbs
- Heavy duty air intake guard
- Lockable tool box

Circle one: Yes or No. Explain any exceptions:

WARRANTY.

Manufacturer's warranty shall be a minimum of 12 months on entire machine covering parts and repair labor, excepting common wear parts. Bidder shall attach copy of warranty.

Circle one: Yes or No. Explain any exceptions:

MANUALS.

Successful bidder shall provide one printed copy of Operator's Manual and one copy of current parts and repair manuals on computer CD.

PERIODIC MAINTENANCE CHART.

Unit shall have permanently affixed charts/diagrams that describe the machine periodic maintenance locations and lubricant requirements.

Circle one: Yes or No. Explain any exceptions:

DEMONSTRATION.

The vendor or manufacturer of the crawler dozer which is seriously considered for award shall, at the request of the customer, demonstrate the crawler dozer at a location chosen by the customer and in the presence of authorized customer representatives to prove out any features which may be in question. Failure of the demonstration machine to meet customer requirements may be adjudged as nonconformance to these specifications.

Circle one: Yes or No. Explain any exceptions:

DELIVERY.

Bidder shall provide the expected delivery date.

Include delivery to Redbird State Riding Area. Take State Route 54 West towards Dugger, In. Approximately 5 miles to county road 1500, turn right (North) onto county road 1500, then turn onto the first county road left (West), and service building will be on your right about 1 mile off county road 1500.

Circle one: Yes or No. Explain any exceptions:
